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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,500	01/25/2002	Hakan Wolge	10625-003001	4378
21839	7590	01/14/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			CHEN, TE Y	
		ART UNIT		PAPER NUMBER
		2171		11
DATE MAILED: 01/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.



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09/936,500	01/25/2002	Hakan Wolge	10625-003001	4378
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DATE MAILED: 01/29/2004

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/936,500	WOLGE, HAKAN
Examiner	Art Unit	
Susan Y Chen	2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 09 October 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-15 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

13)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a)  The translation of the foreign language provisional application has been received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)      4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)      5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7-8 .      6)  Other: \_\_\_\_\_ .

## **DETAILED ACTION**

Claims 1-15 are presented for examination.

A telephone interview has been conducted between the examiner and applicant's attorney – Penny Gaudle on Jan. 7, 2004. The examiner requests that applicant to provide the support for the ambiguously claimed features from the instant specification. During the interview, the attorney recognized the ambiguous nature of the claims and admitted that she will consult with the applicant to amend the claims based on the logical flow of the invention as cited in Fig. 2.

### ***Specification***

The specification is objected to because of the following informalities:

- a) The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The current title is imprecise.
- b) The plurality of tables in the Appendix A should be transformed into Figures and the reference to the Appendix in the current specification should be modified accordingly.
- c) The Abstract of Invention is missing from the instant application.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification. Also, It is noted that although the claims contain line numbers. The lines in the claims do not correspond to the preferred format. The preferred format

is to number each line of every claim, with each claim renumbered by starting with line 1 at seq. For ease of reference by both Examiner and Applicant all future correspondence should include the recommended line numbering.

***Claim Objections***

The claims 1-15 are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim 14 further being objected because there are typos in the claim, e.g., the phrase "tabled" and "a data records" [at line 6]. Proper corrections are requested.

Claim 15 further being objected for omitting the recitations of features in the preceding claims that should be clearly stated individually.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S. C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological art. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological art fail to promote the “progress of science and the useful arts” (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a method claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In *Bowman (Ex parte Bowman*, 61 USPQ2d 1665, 1671 (BD. Pat. App. & Inter. 2001) (Unpublished), the board affirmed the rejection under U.S.C. 101 as being directed to non-statutory subject matter. Although Bowman discloses transforming physical media into a chart and physically plotting a point on said chart, the Board held that the claimed invention is nothing more than an abstract idea, which is not tied to any technological art or environment.

In the present case, claim 1 recite an abstract idea at the preamble for extracting information from a database via a mathematical function, the steps in the claim body merely evaluating the mathematical function on a set of related tables base on a conversion model, which can be implemented by the mind of a person or by the use of a pencil and paper. In another words, since the claimed invention, as a whole, is not within the technological arts as explained above, these

claims only constitute an idea and does not apply, involve, use, or advance the technological arts, thus, it is deemed to be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 1, although applicant has attempted to incorporate substantially the entire well-known multi-dimensional cubes ad hoc model into his specification [see, page 3, lines 17-25] to thereby support claims to any combination or permutation of features therefrom, the fact that features are mentioned individually does not mean that the applicant has invented anything. There must be some evidence within the application filed that applicant was in possession of the claimed combinations. Since the invention failed to address the claimed structures and mechanisms for: 1) partitioning the extracted information on one or more selected classification variables from a database; 2) identifying all data tables have at least one value of one of the selected variables; 3) defining the metes and bounds of the claimed boundary tables and connecting tables, which are

critical or essential to the practices of the invention. Hence the specification does not enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 2-14, these claims have the same defect as their base claim, hence are rejected for the same reasons.

As to claim 15, which contains the same defects as claims 1-14 via the citation of grouping “any one of the preceding claim “ in the claim, hence are rejected for the same reason.

#### ***Claim Rejections - 35 USC § 112***

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, it is unclear what are the claimed “a number of variables” of data tables [at lines 2-3], “one or more selected calculation variables” [at lines 7-8] and “one or more selected classification variables” [at line 9] refer to? What are the links among these variables, data tables, boundary tables, and connecting tables? Furthermore, it is uncertain what is the benefit to have these variables in the instant invention, how do they contribute to yield a final result data structure of the mathematical function?

As to claim 3, this claim is depend on claim 1, it is not understood why applicant defer the citation of a reading step to this claim instead of claim 1, because based on the logical flow of instant application, the reading step happens at the beginning of instant invention processing, which should occurred before any operations cited in claim 1 [e.g., see Fig. 2]. Thus, the logical dependency of this claim is invalid.

As to claim 4, which have the same defect as cited in claim 3, i.e., the logical dependency of this claim is invalid. The claimed assigning binary code step at this claim should occurred before the claimed identifying processing as cited in claim 1.

As to claim 5, it is not understood why by assigning virtual connections will create a database with a snowflake structure? [i.e., what protocol (or form) was used by the claimed virtual connections to ensure a snowflake structure?]

As to claim 6, it is not understood what does it meant by "defining a subset of data tables consisting of boundary tables containing such variables and data tables connecting such boundary tables"?

As to claim 7, it is unclear what are the links between the claimed starting tables, data tables, boundary tables, and connecting tables?

As to claims 8 and 9, it is not understood what kind of artificial intelligent was used by the claimed conversion structure to concert each value of each connecting variable of the data record into a value of at least one corresponding selected variable?

As to claim 12, it is not understood what is the benefit to eliminate one of the classification variables in the intermediate data structure by creating additional data records and incorporating the aggregated results in the additional data records of the intermediate data structure?

As to claim 13, it is uncertain what does it meant by “evaluating mathematical function based on said results in said aggregation fields for each unique combination of values of said classification variables, thereby building said final data structure” [i.e., How the claimed aggregation fields is associated to each unique combination of values of the classification variables? What are those unique combination of values of the classification variables? Why by evaluating mathematical function can thereby building the claimed final data structure?]

As to claim 14, it is unclear what does it meant by “moving from said boundary table towards said starting table” [i.e., what was being moved from the boundary table towards the starting table? who performs the moving operation? Why doing so?] Furthermore, it is not understood how the claimed moving operation can be performed without find a starting table?

As to claim 15, this claim contains the same defects as claims 1-14 via grouping “any one of the preceding claims” in the claim, hence are rejected for the same reason.

As to claims 2 and 10-11, these claims have the same defect as their base claim, hence are rejected for the same reason.

Due to the ambiguity of the claims, a sufficient prior art search could not be generated. The applicant is requested to restructure the claims to comply with 37 CFR 1.75 and 35 USC 112 1<sup>st</sup> and 2<sup>nd</sup> paragraph in order to allow the examiner to determine exactly what the features applicant is claiming.

To expedite the process of examination, the examiner requests that all future correspondences in regard to overcoming prior art rejections or other issues (e.g. 35 U.S.C. 112) set forth by the Examiner prior to the office action, that applicant should provide and link to the most specific page and line numbers of the disclosure where best support is found (see 35 U.S.C. 132).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y Chen whose telephone number is (703) 308-1155. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (703) 308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-6296.

Susan Chen  
Jan. 8, 2004

Elle  
Uyen Le  
AU 2171